

Amendments to the Specification:

Please replace the Abstract with the following paragraph:

A utility for comparing two objects in an object-oriented operating system that also records the differences so that they may be put into human-readable form. In one exemplary embodiment of this invention, two Java JAVA objects are compared by calling one of the equality methods. If the selected equality method indicates that there is a difference between the two objects, then get . . . () methods of each object are invoked in turn. The results get . . . () methods are compared. If there are differences, the differences are stored in an XML document. The get . . . () method is recursively invoked until the Class of the result has no more get . . . () methods to decompose.

Please replace paragraphs [0005], [0006], [0008], [0009], [0019] and [0026] of the Specification as published (*See US 2004/0221264 A1*) with the following paragraphs:

[0005] In more modern, object-oriented software areas, however, this differentiation utility is not always a part of the system. For example, Java JAVA, a programming language and operating system developed by Sun Microsystems, only provides a way of comparing the equality of two objects of the same Class. There is no universally defined method to determine the differences between two objects.

[0006] Therefore, a problem exists in the current object-oriented software art to differentiate between two objects of the same Class, especially in Java JAVA.

[0008] Advantageously, the objects to be compared are Java JAVA objects and the differences are recorded in XML format, which is easily transformed into human-understandable form (e.g., transform the XML into web pages using XSL).

[0009] In one exemplary embodiment of this invention, two Java JAVA objects are compared by calling one of the Java JAVA equality methods. The equality method Comparable.compareTo() is used if the objects to compare are instances of Comparable. Otherwise, the Objects.equals() method is used. If the selected equality method indicates that there is a difference between the two objects, then the get . . . () methods of each object are invoked in turn. The results of the get . . . () methods are compared. If there are differences, the differences are stored in an XML document. The get . . . () method is recursively invoked until the Class of the result indicates no further get . . . () methods to decompose.

[0019] In this illustrative embodiment of this invention, two Java JAVA objects are compared by calling one of the Java JAVA equality methods, "Comparable.compareTo()" or "Objects.equals()," which are known in the art. While the exemplary embodiment of this invention is described using Java JAVA, one skilled in the art will appreciate that this invention can be implemented in any object-oriented language that supports method introspection after studying this specification. According to the exemplary embodiment of this invention, the Java JAVA equality method "Comparable.compareTo()" is called if the objects to compare are instances of Comparable. Otherwise, the "Objects.equals()" method is called. If the selected equality method indicates that there is a difference between the two objects, then get . . . () methods of each object are invoked in turn. As will be illustrated further, below, in a get . . . () method, the ellipse represents the name of the method. The results of the get . . . () methods are compared. If there are differences between the methods, the differences are stored in an XML document. Importantly, the get . . . () method is recursively invoked until the Class of the result has no more get . . . () methods to decompose.

[0026] In bracket 150, one of the Java JAVA equality methods is run on Object "a" and Object "b." In 152, if "a" is an instance of a list, then the results of a call to the compareLists function is returned. If "a" is an instance of an object of type "Comparable" in 154, then "a" is compared to "b". Otherwise, a.equals(b) is returned in 156.